DOCUMENT RESUME

ED 154 355 CS 004 078

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TITLE First Ade for the Man or Gril Who Dose not Spel Mutch: Fernald Revisited.
PUB DATE Mar 78
NOTE 11p.; Paper presented at the Annual Meeting of the Western Reading Association (11th, Long Beach, California, March 16-19, 1978)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Cognitive Development; *Kinesthetic Perception; *Learning Disabilities; *Learning Modalities; Learning Processes; *Multisensory Learning; *Spelling Instruction; *Tactual Perception; Vocabulary

ABSTRACT

The tactile-kinesthetic approach to spelling provides a practical teaching device for use with both disabled learners and moderately poor spellers who need to learn a technical or professional vocabulary. This multisensory approach to learning teaches to the student's strengths and places emphasis on finger contact, muscle movement, saying and hearing the word, and sight in an effort to utilize and train as many areas of the brain as possible. A useful technique employed in this teaching method is tracing a word in large written letters three or more times while spelling and saying the word aloud. In this excercise, concentration on the pressure of the arm and finger is essential in crder to transmit the correct message to the brain. (MAI)

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Betty L. Heinze

First ade for the man or gril who dose not spel mutch: Fernald revisited

In any group of students utilizing the services of the reading clinic, learning center, remedial courses, tutors, or whatever--the name is not important--what is important is that there will be a number of disabled spellers desperately seeking help. And how to help them becomes, for many, almost as desperate a problem. Certainly these students are not ready for the kinds of instruction suitable for many of their peers. As a result it is often difficult to assist them in a group situation, which compounds the problem of method with those of staffing and resources. So what to do with this problem speller, who is probably also a problem reader and student in general? The tactile-kinesthetic approach (also called the VAKT--Visual, Auditory, Kinesthetic, Tactile) can be a practical and successful means of helping such spellers, even within the classroom. It is equally valuable for those with only a moderate spelling problem who have a need to spell a technical or professional vocabulary accurately. Aspects of this technique are probably familiar to most reading teachers, although they may have used them only in the clinical situation.

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It may be useful, therefore, to mention briefly the the means of identifying students who will benefit, to discuss the multi-sensory modalities involved in such a method, and to describe a technique for word tracing with suggestions for class or tutorial use.

This concept is not new, of course. Since the pioneering work of Dr. Grace Fernald of U.C.L.A. in the 1930's, the tactile-kinesthetic method has been refined in many clinics. However, the adaptation presented here has been developed by reading specialists and teachers and used extensively in college classrooms, learning centers, and reading centers.

Identifying students who will benefit from such a program has been a problem. Ideally, multidisciplinary diagnostic testing of psychological and psycholinguistic functions would be administered individually. Practically, however, few campuses are equipped to provide such services. As a result, something usually must be done quickly on the basis of standardized tests which do not identify severe problems of substitutions, omissions, and/or reversals. The Diagnostic Spelling Test: A Modification of the Wide Range Achievement Test, Spelling (Level II) does identify such problems (14 and 15). If this test is not available, the Boder (or an adaptation) should be used (4).

Once the student has been identified, a multi-sensory approach to learning will teach to his strengths, regardless of what they may be. Dr. Elena Boder recommends tactile-kinesthetic training for each of the three types of dyslexics she identifies: Group I, deficit in ability to "auditorize"; Group II, deficit in ability to "visualize"; Group III, deficit in both ability to "auditorize" and "visualize" (4). Dr. Howard Walton, of the Southern California

College of Optometry, has identified these three groups as the dysphonetic, dyseidetic, and dysphoneidetic. He has further identified four other combinations of disabilities: dysnemkinetic (deficit in ability to develop motor gestalts for written symbols); dysphonemkinetic (deficit in relating sound and in memory of movement); dyseidonemkinetic (deficit in ability to visualize and in memory of movement); and the dysphoneidonemkinetic (deficit in areas of sound, image, and memory of movement) (22). Regardless of the specific problem, or combination of problems, the tactile-kinesthetic approach teaches to the strengths and helps retrain in the areas of weakness, be they auditorizing, visualizing, or memory of movement.

Another advantage of this method is that it is not necessary for the student to continue to trace forever. This technique will usually straighten out the circuits so that he will be able to learn words by more conventional means.

It should be noted here that the term "tactile-kinesthetic" is being employed throughout this paper for two reasons: first, it is commonly used and understood; second, it rightfully places emphasis upon finger contact and muscle movement in relation to the technique. However, as indicated above, the three problem areas, and those in which retraining and learning take place, are the auditory, the visual, and the nemkinetic (memory of movement). The tactile reinforces only the awareness of the texture of the surface being traced: paper, crayon on paper or cardboard, et cetera. (Only in the braille system is the tactile sense, of itself, truly significant.) The tactile <u>is</u> important, however, to a full utilization of the kinetic modality, which is of such great importance in writing and spelling. Therefore the term "tactile" is retained in reference to the word-tracing technique.

Multi-sensory modalities utilized
by the tactile-kinesthetic method
(Insert here the schematic of the brain)

Mature students will enjoy an explanation of the process of learning involved in the spelling technique. The following information might be of use in training tutors to work with the material.

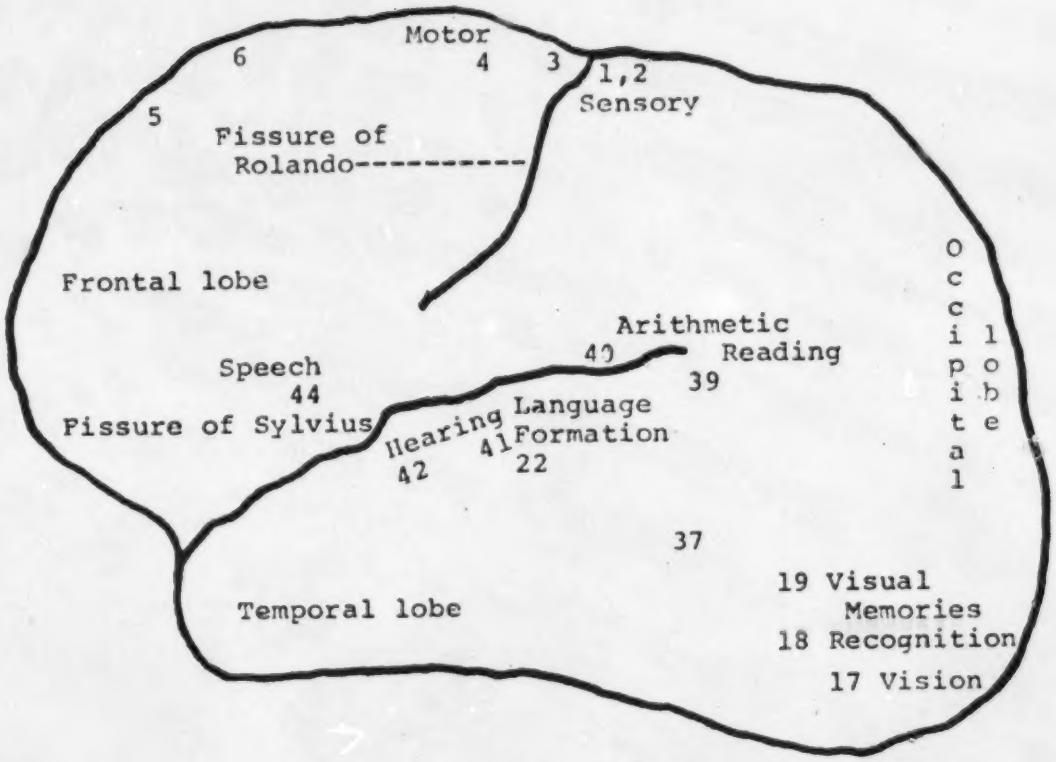
The visual method of memorizing spelling words need involve only areas 17, 18, and 19. If #17 is stimulated, the individual sees flashes of light or flame. Stimulation of #18, recognition, produces images, such as cars, trees, persons, et cetera. A picture is formed (recognized) in #18, but it is remembered in #19. No reading occurs in these areas, however. Area 39 must be utilized for cortical vocalization. Thus only three closely related areas (17-19) need be used in looking at a word in an attempt to learn its form, with one additional area possibly being involved (if the student actually reads the word--#39).

The tactile-kinesthetic method of learning makes good use of eight additional areas of the brain, each of which is capable of memory. The tracing involves areas 1 and 2, the sensory, and the motor, #4. Word formation utilizes speech, #44, and language formation, as well, #22 (which is involved in structural analysis and syllable formation). When a word is spoken, the ear can hear, areas 41 and 42. In addition, the auditory and visual components of phonetic syllables and structure of words are brought together in area 37.

Thus, instead of relying upon one limited area of the brain to learn, this technique makes use of the maximum area possible--twelve, rather than three (or four, if reading occurs, which should happen but doesn't always).

The tactile-kinesthetic method of spelling for adults

Motivation plays an important part in this technique. The



The Brain

(Numbered according to Brodmann's method)

actual word-tracing and saying can appear deceptively simple and thus, perhaps, ineffective to a mature student. But he will have the maturity to understand the concept of coordinated sensory input, provided it is explained.* Such an explanation can refer to the areas of the brain as mentioned above, and should certainly make reference to an individual's ability to learn through the senses, including not only the most obvious ones of sight and hearing but also the less obvious of touch and kinesthesis (muscle sense). All of these modalities can feed information on spelling to the brain. It is also useful, if working with a group, to mention some of the kinds of problems this technique can help solve. The student must be assured that even though the technique itself looks like simple tracing, it is much more than that. Touch, muscle, saying, hearing, and sight must be coordinated, or matched in time.

The technique is as follows. Ask the student to pretend to write a simple word (such as body) with his finger. It should be written so large that it takes up the whole width of a piece of notebook paper, and it must be written--no printing is ever used with this method. After the word has been "written" with the index finger, it should be done again with these important differences. The full arm must be on the table, including the elbow. Firm pressure should be used so that the paper is felt, and the movement should also be felt along the bottom of the arm. The finger-writing should be repeated several times, with the same big size and concentration on the pressure of the finger tip on the paper and the arm movement. The wrist should stay stiff. Heavy jackets or sweaters

*There is a commercial program available which addresses itself to the problem of motivation in a filmstrip/cassette presentation of the technique (24).

should be removed before working with this method. The foregoing practice is for the purpose of introducing the student to a consciousness of two senses he's probably never made use of before in spelling: the tactile and the kinesthetic.

At this point the student should be provided with a word slip (a strip 3 3/4" X 8"--four can be cut from one sheet of ditto paper). Each word to be learned must be written cursively, blackboard size, the full width of a slip. Students should not make their own word slips for obvious reasons. The student then puts his elbow on the table, and using the index finger of the hand he normally writes with, traces the word, using a pressure he can feel, while pronouncing the word aloud. It is important that the sounds of the syllables be heard--the names of the letters must not be used--and the tracing and sounding must coincide. Now any t's are crossed and the i's dotted. This procedure requires a not-so-simple coordination of many senses. Be especially sure students include the sound. If the saying is omitted the hearing is also lost, so two parts of the system will be missing and it won't work as well.

The word should be traced this way three times or more, and the "more" might mean ten or fifteen times. This should come as no surprise; the system will still work. At any rate, the word should be traced until the student feels he knows the spelling. Then he puts the word slip aside and traces the word with his finger on the table, keeping a firm pressure as the word is said softly. If he is not certain of the spelling, he should trace on the word slip again. When certain of the spelling, he is ready to use a pen or pencil to write it on a piece of paper, pronouncing as he writes. The spelling should then be checked against the word slip. Then everything is covered and the word written again. The process

of covering, writing, and checking should be done a minimum of three times. If a mistake occurs, the misspelled word should be crossed out and the saying and tracing repeated.

It is best to use the same word slip for all students for demonstration purposes if they are working in a group. They can work on their own problem words after they have mastered the technique. Five to ten words are enough to work on at a time. Those words should be learned that will be useful to him. If he is in a class, any words he misspells on his papers can be put on word slips for him to learn. He can also request any that he wants written for him. If he is being helped in a learning center, his words can come from essentially the same sources: those he has misspelled on papers for other classes and/or those he chooses for himself. Once the technique is mastered, all that is necessary is for someone to write the wordslips for the student and perhaps to dictate a follow-up spelling quiz.

As students gradually master the words they most frequently use, it makes a surprising difference in their writing (and reading) that can make an even greater difference in their self-confidence and self-image.

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